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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,102	07/31/2001	Howard Fein	HOFE / 02	2446

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EXAMINER

WITZ, JEAN C

ART UNIT	PAPER NUMBER
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1651

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,102

Applicant(s)

FEIN, HOWARD

Examiner

Jean C. Witz

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,8,9,24,25,30,31,34,35,37-40 and 43 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 1-2, 4-5, 8-9, 24-25, 30-31, 34-35, 37-40, 43 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed December 20, 2005 have been fully considered but they are not persuasive for the reasons set forth below.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 34-35 and 37-40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by SU 1685448.

This rejection was made in the two office actions prior to the most recent request for continued examination and was inadvertently omitted from the previous office action. In the amendment filed with the RCE, Applicant had amended the other pending claims to change transitional phrasing from "comprising" to "consisting essentially of" and the Examiner inadvertently attributed this amendment to apply to claims 34-35 and 37-40; however, review of claims at this time indicated that the cited claims indicated that these claims still retain "open" claim language and that the rejection under this statute still applies even in view of the arguments presented regarding the use of the term "selective" in the claims. These arguments were addressed in the previous office action but are reproduced here for clarity.

Per 37 CFR 1.113(a), on the second or any subsequent examination or consideration by the examiner, the rejection or other action may be made final; therefore, the finality of this office action is proper and not premature, even though the

rejection was not made of record in the previous office, because the rejection has been made of record now three times during the prosecution of this application and Applicant specifically addressed the issue with both arguments and amendments.

Applicant's arguments presented against this rejection were based upon the language of the claims requiring selective regulation of the removal of the layer of the skin suffering from the condition. This regulation is a function of conventional enzyme kinetics. As evidenced by the discussion of enzyme kinetics at <http://web.indstate.edu/thcme/mwking/enzyme-kinetics.html>, enzymes are specific for the kind of reaction that they catalyze and, in general, the substrate that they attack. The rate of this reaction is a function of the amount of enzyme, the amount of substrate to be acted upon and the time that the enzyme is permitted to be in contact with the substrate. The greater the enzyme concentration and the longer the exposure time of the enzyme to the substrate, the faster the reaction time and the greater the amount of substrate that is acted upon. Therefore, the disclosure of SU1685448 as to the type and amount of trypsin enzyme as well as the administration procedure does indeed disclose a selective and regulated removal of the layer of the skin that was afflicted by the skin condition by an enzyme in an amount and for a duration effective to treat said condition because the reference teaches the use of the same enzyme as claimed for the treatment of the same condition as claimed and also discloses that upon treatment, the condition was resolved.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-5, 8-9, 24-25, 30-31, 34-35, 37-40 and 43 remain rejected under 35 U.S.C. 103(a) as being unpatentable over the disclosure of SU1685448 in view of U.S. Patent to Rawlings et al., U.S. Patent 4,112,121 to Tenta, U.S. Patent 5,411,741 to Zaias and non-patent literature reference to Burbach, Dermatologica 118: 379-391 (1959) for the reasons of record.

Applicant argues that the SU1685448 is no longer applicable prior art because the theophylline, sunflower oil and lanolin found in the composition of foreign patent SU1685448 materially affect the activity of the trypsin in the composition and therefore are excluded by the use of the phrase "consisting essentially of" in the claims. However, the references provided by Applicant do not disclose that the theophylline, sunflower oil and lanolin directly interfere with the activity of the trypsin; instead, the references provided by Applicant state that these compounds improve the degree of hydration of the skin. Another reference, Sato et al., states that a reduced degree of hydration of the skin results in a reduced activity of the endogenous chymotrypsin-like serine protease on the desmosomal proteins. However, Applicant teaches that "[a]ny type of suitable, physiologically acceptable enzyme formulation may be used, as is known to one of skill in the art. Examples of such formulations include, but are not

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limited to, creams, ointments, lotions, emulsions, foams, aerosols, liniments, gels, solutions, suspensions, pastes, sticks, sprays, or soaps.” It would certainly appear that formulations of creams, ointments, lotions and emulsions, in the least, affect the degree of hydration of the skin and therefore, under Applicant’s rationale, the activity of the trypsin enzyme, but Applicant considers these formulations suitable for use with and not affecting the activity of the enzyme. It remains unclear how lanolin, theophylline and sunflower oil are excluded, but the creams, ointments and lotions, which do affect the hydration of the skin, are included.

Applicant’s arguments that the SU1685448 is no longer applicable prior art fail to take into consideration the rejection was not made under 35 USC 102, but instead was made under 35 USC 103. The only other interpretation of Applicant’s arguments appears to be that it is unpredictable that the trypsin would have the effect of treating the seborrheic keratopapillomata (a synonym for seborrheic keratosis) without the theophylline, lanolin or sunflower oil. However, U.S. Patent 5,665,366 to Rawlings et al. teaches that the stratum corneum trypsin-like enzyme (SCTE) may be administered alone or in combination with suitable additional proteases such as trypsin to the skin in a vehicle. At col. 12, a composition of SCTE in ethanol, perfume, BHT and water is disclosed. No lanolin, theophylline or sunflower oil is necessary, yet this composition is disclosed as appropriate for the topical treatment of the skin for the disclosed purposes. U.S. Patent 5,665,366 to Rawlings et al. discloses multiple formulations in multiple forms, all suitable for the administration of the SCTE and, if desired, trypsin to the skin

for the treatment of conditions of the skin where the condition is characterized by hyperkeratinisation.

As explained in the previous office action, the selectivity of trypsin for the epidermal layer as a substrate was well known and the result of topical or injected application of trypsin to the epidermis was known and expected. The use of a composition consisting essentially of trypsin would have been obvious to one of ordinary skill in the art at the time the invention was made in order to effect a regulated removal of specific areas of the epidermis afflicted by seborrheic keratosis.

Therefore, one of ordinary skill in the art would have a reasonable expectation of success in the treatment of seborrheic keratosis with a composition that contains trypsin but eliminates DMSO because one of ordinary skill in the art would expect the trypsin to act on the seborrheic keratotic lesion by degrading the desmosomes and desquamating (i.e. removing) the hyperkeratotic cells of the lesion. When these cells are removed, the lesion is removed and as evidenced by the disclosures of the prior art, the condition is resolved. It is noted that Rawlings et al. teaches dimethyl sulphoxide (DMSO) as an optional alternative solvent and not a required component of the enzyme composition. See col. 3, lines 23-28.

Conclusion

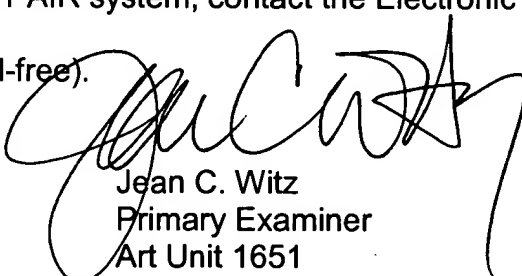
4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean C. Witz whose telephone number is (571) 272-0927. The examiner can normally be reached on 6:30 a.m. to 4:00 p.m. M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on (571) 272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jean C. Witz
Primary Examiner
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